

REMARKS

Reconsideration of the application is requested in view of the above amendments and the following remarks. Claims 21, 22, 25, 28 and 32-36 have been cancelled. Claims 1, 11, 20, 24 and 29 have been amended. Claims 11 and 20 have been amended to include the limitations of cancelled claims 21 and 22 (claim 22 being allowable). Claim 24 has been amended to include the limitations of cancelled claim 25. New claim 37 has been added and includes the limitations of cancelled claims 28, 32 and claim 1. The amendments to claim 1 are supported by at least Figures 2 and 8A-C and the related description of those figures in the present specification. No new matter has been added.

Interview Summary

Applicants' representative Joshua Randall (Reg. No. 50,719) conducted a telephone interview with the Examiner Mack and Examiner Patel on July 13, 2004, in which the parties discussed the pending claims in view of the cited reference, Satake. The parties agreed that some minor changes to claim 1 related to material flow out of the outlet aperture while performing the steps (b) and (c) should overcome Satake. The Examiner suggested that claim 20 was overly broad and that claims 24 and 28 and the claims that depend from them may be restricted because they are methods that could be performed using configurations other than those required by claims 1-23.

Amendments to the Specification

The specification has been amended to include section headings.

§ 103 Rejections

Claims 1-5, 11, 20, 21, and 24-32 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Satake (U.S. 5,798,466). Applicants respectfully traverse this rejection. As noted above, claims 28 and 32 have been cancelled and rewritten along with the limitations of claim 1 as new claim 37. Applicants will address this rejection to the extent it relates to new claim 37.

Satake discloses a flow meter 30 that includes a tubular member 3 that acts as a flow conduit, and a movable valve device 10 having a valve member 9 movable between open and close positions A, B. The valve device 10 may be used to determine the amount of material flowing through the tubular member 3. Flow rates into the member 3 defined as QA and QB can be determined when the valve member 9 is in an open position A and in a closed position B, respectively. The flow rate QB is obtained from variations in weight values of material collecting in the tube member 3 over a predetermined time period while the valve member 9 is in the closed position B. The flow rate when the valve member 9 is in the open position A can be determined based an impact load signal EA and a conversion factor a. The flow rate measurements QA and QB are independent from each other and can each be used separately to determine an inlet flow rate into the tubular member 3.

Satake fails to disclose “calculating the inlet flow rate F_{inlet} from said first and second rates” because Satake fails to use the flow rate QA and QB together to calculate an inlet flow rate into the tubular member 3. Furthermore, Satake fails to disclose or suggest measuring first and second rates of change of quantity of material in the chamber while “the whole of the outlet aperture of the chamber is occupied by the flowable material, and flowable material is flowing through the outlet aperture,” as required by claim 1. As discussed above, the flow rate QB is determined while there is no flowable material flowing out of the outlet aperture of the tubular member 3. Therefore, Satake fails to disclose or suggest every limitation of claim 1 and the claims that depend from it.

Claim 20 has been amended to include the allowable subject matter of claim 22 and should now be in proper form for allowance.

Claims 24 and 37 include similar limitations as those recited in claim 1. Therefore, claims 24 and 37 and the claims that depend from them should be allowable for at least the same reasons discussed above related to claim 1. Applicants do not concede the correctness of this rejection as it relates to claims 24 and 37. Applicants further submit that the limitations of claims 24 and 37 are supported by at least Figures 5 and 13 and the description at pages 24-26 of the present specification.

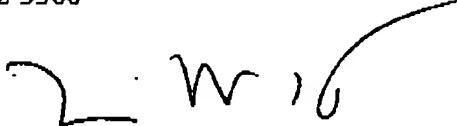
Claims 6-10 and 12-19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Satake and further in view of Davies (GB 2,241,789). Applicants respectfully traverse this rejection. As discussed above, Satake fails to disclose or suggest every limitation of claim 1. Davies fails to remedy the deficiencies of Satake as it relates to claim 1. Therefore, 6-10 and 12-19 are allowable for at least the reason they are dependent upon an allowable base claim. Applicants do not concede the correctness of this rejection.

In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance. If a phone conference would be helpful in resolving any issues related to this matter, please contact Applicants' attorney below at 612.336.4755.

Respectfully submitted,

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